NWS FORM E-5 U.S. DEPARTMENT OF COMMERCE (11-88) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (PRES. by NWS Instruction 10-924) NATIONAL WEATHER SERVICE		HYDROLOGIC SERVICE AREA (HSA) WFO Jackson, Mississippi		
MONTHLY	REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH YEAR November 2013		
TO:	Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE Alan E. Gerard, Meteorologist In-Charge  DATE 12/31/2013		

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)



An X inside this box indicates that no river flooding occurred within this hydrologic service area.

# Synopsis...

This November was not an overly wet month but, overall, the Hydrologic Service Area (HSA) received near normal rainfall. The Jackson ASOS received the most rainfall with over 6.00 inches measured and Greenville the least with 3.50 inches. Enough rainfall fell, however, that there are no more counties or parishes in drought status in the HSA. November proved to be a much colder month than normal in 2013. All ASOS locations were three to four degrees below normal and monthly average temperatures ranged from 50 to 55 degrees.

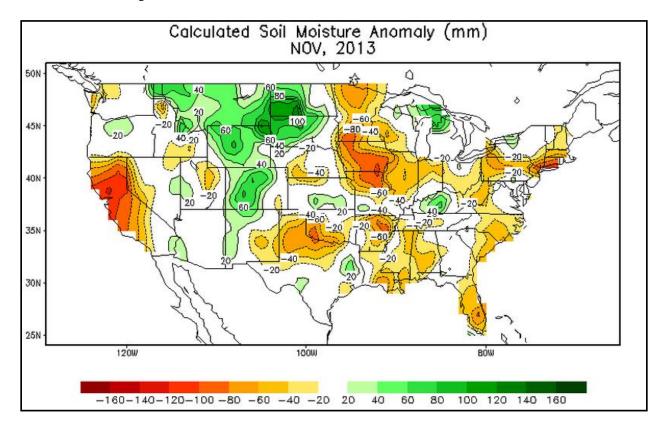
The month started out with a wet cold front moving through the HSA. Locations in Northeast Louisiana received up to 4.00 inches of rainfall while most other areas in the HSA received 1.00 to 3.00 inches. High pressure quickly moved in behind the exiting front and kept the area temperatures relatively mild the next few days. Another, stronger, cold front passed through the Deep South on the 7<sup>th</sup>. It brought little in the way of rain to the HSA and little in the difference of temperatures as well. Strong high pressure built in behind the front again.

On the 12<sup>th</sup>, a dry cold front brought the first hard freeze to many locations in the HSA. The South remained dry until the 15<sup>th</sup> and 16<sup>th</sup> when low level flow shifted from the north to the southeast, allowing warm, moist gulf air to return and rain showers to develop in Southeast Mississippi. Another cold front brought modest scattered rainfall and cool temperatures on the 18<sup>th</sup>. A strong but slow-moving front approached the HSA on the 22<sup>nd</sup> from the northwest and dropped up to 2.00 inches of rainfall in the Delta. The front continued southeast on the 23<sup>rd</sup> and dropped up to 1.50 inches of rainfall just south of the Delta in Mississippi and Louisiana. The front exited the HSA on the 24<sup>th</sup> after coating the rest of Mississippi in some light rainfall.

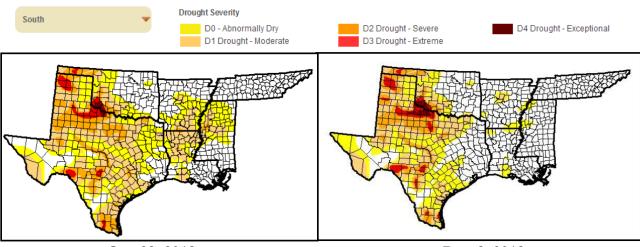
A low pressure system formed in the western Gulf of Mexico on the 25<sup>th</sup> and pressed northeastward into the Deep South on the 26<sup>th</sup>. This system dropped significant rainfall over the entire HSA and up to 4.00 inches in Central Mississippi and Northeast Louisiana. Cold arctic air poured in as the low pressure system continued to track towards the East Coast. Many places dipped into the low 20 degree range on the 27<sup>th</sup>. The rest of the month remained cold and dry.

# **River and Soil Conditions...**

# **Soil Moisture Map:**



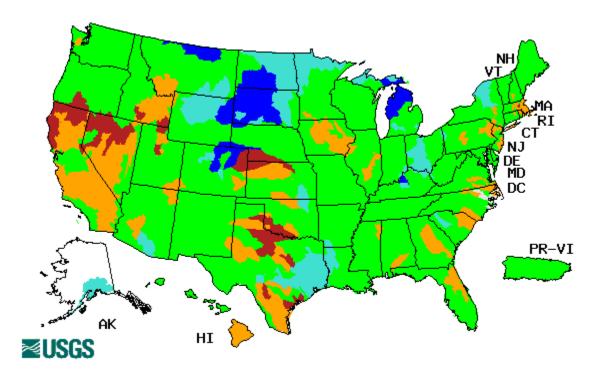
# **Drought Comparison:**



Oct. 29, 2013 Dec. 3, 2013

#### **Streamflow:**

The United States Geological Survey's (USGS) November 2013 river streamflow records were compared with all historical November streamflow records. Streamflow was normal across all of the Jackson HSA in Mississippi, Louisiana, and Arkansas.



### **River Conditions:**

Only minor river flooding occurred along the Tuscolameta Creek, the Big Black, and Upper Pearl Rivers. Only minor to moderate rises occurred on remaining rivers in the HSA. The Mississippi River from Arkansas City to Natchez experienced some several rises and falls in river stage during the month. By month's end, the river was higher than at the beginning for all locations on the river.

### **Climatic Outlook and Flood Potential:**

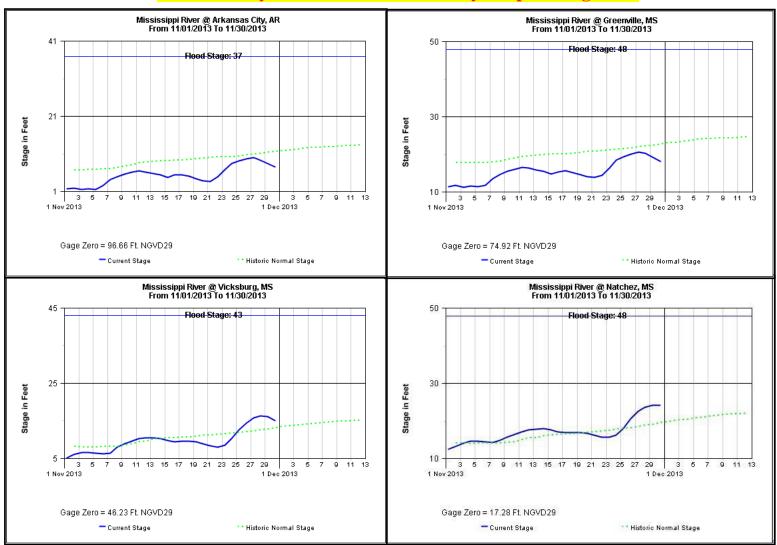
The climatic outlook favors above normal temperatures over the next three month while the precipitation outlook shows an equal chance for above, below, and normal precipitation. Based on current soil moisture, streamflow, and the 3-month weather outlook, the flood potentials are as follows:

Pearl River System: Average.
Yazoo River System: Average.
Big Black River System: Average.
Homochitto River System: Average.
Pascagoula River System: Average.
Northeast LA and Southeast AR: Average.

Tombigbee River System: Average.

Mississippi River: Average.

# Mississippi River Plots November 2013 Plots courtesy of the United States Army Corps of Engineers



### November Monthly Preliminary High and Low Stages:

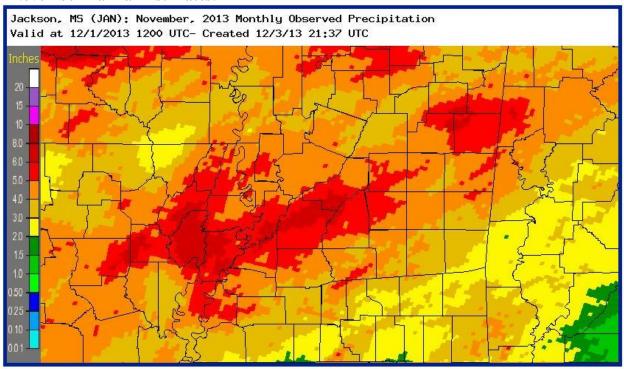
Location	Flood Stage (ft)	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City	37	10.09	11/27	1.52	11/03
Greenville	48	20.70	11/27	11.39	11/03
Vicksburg	43	16.35	11/28	5.22	11/01
Natchez	48	24.31	11/29	12.48	11/01

# Rainfall for the Month of November:

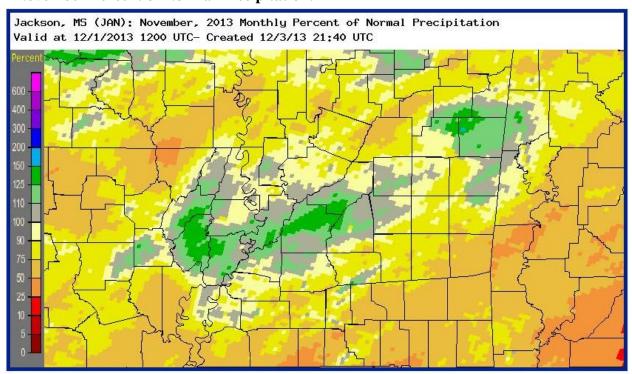
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on October 31st until 7 am on November 30th were:

11.54 inches at Rayville, LA; 9.72 inches at Winnsboro 5SSE; 9.24 inches at Lake Providence, LA; 9.11 inches at Oak Grove, LA; 8.64 inches at Vicksburg, MS; 8.82 inches at St. Joseph, LA; 8.14 inches at Yazoo City, MS; 7.95 inches at Goshen Springs, MS; 7.67 inches at Cleveland, MS; 7.59 inches at Raleigh, MS; 7.54 inches at Grenada Dam, MS; 7.25 inches at Jonesville L&D, LA; 7.22 inches at Ross Barnett Reservoir Tower, MS; and 7.05 inches at Walnut Grove, MS

### **November Rainfall Estimates:**



### **November Percent of Normal Precipitation:**



Note: Observer rainfall and MPE may differ due to time differences. (total and percent of normal)

### **November Rainfall for Selected Cities:**

City (Airport)	Rainfall	Departure from Normal	2013 Rainfall	2013 Departure from Normal
Jackson (KJAN)	6.63	+1.87	59.76	+10.77
Meridian (KMEI)	4.77	-0.18	59.92	+8.82
Greenville (KGLH)	3.53	-1.53	48.31	+1.29
Greenwood (KGWO)	3.99	-0.53	53.70	+7.58
Hattiesburg (KHBG)	3.58	-0.69	62.08	+7.82
Vicksburg (KTVR)	6.23	+1.23	63.58	+14.45

Total Flood Warning products issued: 3
Total Flood Statement products issued: 14
Total Flood Advisories MS River : 0

Daily Climate and Ag WX Products (AGO'S) issued: 30 Daily CoCoRaHS Rainfall Products (LCO'S) issued: 30 Daily River and Lake Summary Products (RVD'S) issued: 30

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District

**USGS** Ruston District

**USACE Mobile District** 

**USACE Vicksburg District** 

**USACE** Mississippi Valley Division

USGS Mississippi District

SRH Climate, Weather and Water Division Lower Mississippi River Forecast Center

Pearl River Valley Water Supply District

**Hydrologic Information Center** 

Southern Region Climate Center

Pat Harrison Waterway District

Pearl River Basin Development District